Chapter 5

DRUGS AND POISON INFORMATION

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INTRODUCTION

DRUG INFORMATION:

- **Drug information** means providing clinically relevant information on any aspect of drug use relating to individual patients, or general information on how best to use drugs for populations.

- **Drug information service** can be applied to any activity where information about drug use is transferred, and includes patient-related aspects of pharmaceutical care.

- A **Drug information center** is an area where pharmacists (or other health care professionals) specialise in providing information to health professionals or public.

- The drug information centre provides authenticate, unbiased information to healthcare professionals, provide tailor-made counselling and health information to patients/consumer as well as monitor and document adverse drug reactions.
The first drug information centre was opened in 1962 at the university of Kentucky medical centre and was intended to be utilised as a source of selected, comprehensive drug information.

A drug information centre can also contribute to pharmacovigilance (adverse drug reaction reporting), drug use reviews, health education programmes and clinical research.
POISON INFORMATION:

• Poison information is a specialised area of drug information which includes information about the toxic effects of chemicals and pesticides, hazardous material spills, household products, overdose, of therapeutic medicines including mushrooms, animal toxins from bites of snakes, spiders and other venomous creatures and stings.
**Main Objectives:**

The objectives of DIC are:

- To provide an organized database of specialized information on medicines and therapeutics to meet the drug information needs of practitioners.
- To educate pharmacy students to serve as effective providers of medicines information. [13]
- To provide accurate and unbiased medicines information service to the pharmacists, physicians and other health care professionals in the hospital and community.
- To promote patient care through rational use of medicines.
DRUG INFORMATION RESOURCES:

- Textbooks, newsletters, journals,
- Newsletters, microfiche reader,
- Optical discs,
- Computer systems
- Tertiary resources >>> Secondary resources >>> Primary resources
Primary resources:

- Primary literature describes unique experiences which change the world in terms of available knowledge.

- They are the foundation on which all other drug information is based. These include journal publications on drug-related subjects, such as reports of clinical drug trials, case reports, and pharmacological research. Evaluating primary literature is difficult.

- The most reliable evidence comes from reports on randomized controlled trials. Proper evaluation of these trials requires considerable experience, and systematic reviews of combined trials (meta-analyses) may be necessary.
• Sources:
  ➢ *Medical and therapeutics Journal:*
    *annals of internal medicine.*
    *british medical journal.*
    *journal of the medical association.*
    *New England Journal of Medicine.*
  ➢ *Pharmacy journals:*
    *American Journal of Hospital Pharmacy.*
    *Clinical Pharmacy.*
    *DICP-Annals of pharmacotherapy.*
    *Journal of Clinical and Hospital Pharmacy.*
  ➢ *Drug and Toxicology Information and Pharmacology Journal.*
    *British Journal of Clinical Pharmacology.*
    *Human and Experimental Toxicology.*
**Secondary sources:**

* secondary sources consists of reviews of primary reports. These provide a personal perspective of the literature and can include comments on how the author might apply the information in practice.

- Medline
- International Pharamaceutical Abstracts
- Chemical Abstracts
- IOWA drug Information Service
- DRUGDEX
- Martindale
- POISINDEX
Tertiary resources:

Tertiary resources are summaries of the primary and secondary published literature. Printed textbooks are the main example and these are characterised by a slow rate of revision compared to secondary sources.

- AHFS-Drug information Book, Australian Medicine Handbookook, Meyler's Side Effect of Drugs
- Avery’s Drug Treatment
- Basic skills in interpreting Lab data
- Drug information handbook
- Drug interactions Stockley/ Facts and comparison
- Handbook of injectables
- Harrison’s Principles of Internal Medicine
- Martindale, Pharmacist's, Physicians desk ref
- Merck index, Merck manual,
- BNF, USP, Australian formulary
Alternative other resources

- Local drug lists
- National formulary
- Hospital formulary
- Phone calls to manufacturer, medical shops, government and national organisations, drug information centers
- Internet, Medscape
- Cochrane meta analysis

Examples of specific sites include:
- National institute for health and clinical excellence, UK (WWW.nice.org.uk)
- National prescribing centre, Uk (WWW.npc.org.au)
- Canadian agency for drugs and technologies in health (WWW.cadth.ca)
Approach to answering drug information queries:

- Analyse the type of drug information
- Understand the background of the question
- Understand the real need of the physician
- Follow systematic approach
THE BASIC STEPS TO APPROACHING DRUG INFORMATION ENQUIRIES ARE:

1. Secure demographic details of the requester:
   * identify the enquirer and obtain sufficient details
   * the requestor’s profession (physician, pharmacist, nurse, lay person) - to know education, experience and knowledge base.

2. Obtain background information.
   General questions for obtaining background information includes
   * The resources that the requestor already consulted
   * Whether the request is patient specific or academic
   * The patient’s diagnosis, medications and pertinent medical information
   * The urgency of the request
3. **Refine and categorise the ultimate question:**

* Classification of the request helps in developing a more effective search strategy and in determining the resources that should be used.

  *This information may help to refine the question and to estimate the time required to achieve an acceptable response.*

  * example of question classification:
  
  ▪ adverse drug reaction/ contraindications
  ▪ availability
  ▪ Dose
  ▪ Drug compatibility/ stability
  ▪ Drug interaction
  ▪ Drug therapy
  ▪ Drug identification.

4. **Develop a strategy and conduct a search:**

  *The pharmacist should select and prioritize resources based on the probability of locating the desired information.*
Conduct a systematic search:

* Be familiar with the three types of information sources in the literature hierarchy

* Begin with the established knowledge located within the tertiary literature (e.g., textbooks) due to the condensed, easy-to-use format of the information presented

* Progress through the secondary literature (e.g., PubMed, International Pharmaceutical Abstracts [IPA]) to the primary literature (e.g., controlled clinical trails, letters to the editor)

5. Perform evaluation, analysis and synthesis:

* The pharmacist should confirm information with other references to assure consistency between various resources and whether clinical research is relevant to your population or specific patient.

* The pharmacist should apply his or her techniques and skills for literature evaluation and clinical application for statistical analysis
6. **Formulate and provide a response:**
   * answers should be derived only after critically analysing information obtained from a comprehensive search.
   * provide a formulated response to the enquirer in a timely manner.
   * present the competing viewpoints along with the reference.
   * all responses should be documented with the minimum detail necessary to justify the response.

7. **Conduct follow-up and document the outcome:**
   * determine the consequence of your advise and any patient outcomes.
   * advise provided should be recorded in at least ine mode of documentation (log book, paper worksheet, computer database).